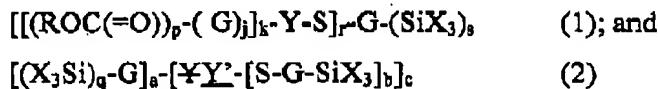


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IN THE CLAIMS

1. (Currently Amended) A blocked mercaptosilane selected from the group consisting of:



wherein

i) for structures (1) and (2), Y is a polyvalent species (Q),A(=E) selected from the group consisting of -C(=NR)-; -SC(=NR)-; -SC(=O)-; -S(=O)-; -S(=O)_2-; -OS(=O)_2-; (-NR)S(=O)_2-; -SS(=O)-; -OS(=O)-; (-NR)S(=O)-; -SS(=O)_2-; -(-S)P(=O)-; -P(=O)(-); -(-S)P(=S)-; -P(=S)(-); (-NR)_2P(=O)-; (-NR)(-S)P(=O)-; (-O)(-NR)P(=O)-; -(-O)P(=O)-; -(-NR)P(=O)-; (-NR)_2P(=S)-; (-NR)(-S)P(=S)-; (-O)(-NR)P(=S)-; -(-O)P(=S)-; and -(-NR)P(=S)-;

ii) for structure (1), Y is a polyvalent species (Q),A(=E) selected from the group consisting of -(-S)P(=O)-; -P(=O)(-); -(-S)P(=S)-; -P(-S)(-); -(-O)P(=O)-; and -(-O)P(=S)-. Y is a polyvalent species (Q),A(=E) selected from the group consisting of -C(=NR)-; -SC(=NR)-; -SC(=O)-; -S(=O)-; -S(=O)_2-; -OS(=O)_2-; (-NR)S(=O)_2-; -SS(=O)-; -OS(=O)-; (-NR)S(=O)-; -SS(=O)_2-; (-NR)_2P(=O)-; (-NR)(-S)P(=O)-; (-O)(-NR)P(=O)-; -(-NR)P(=O)-; -(-NR)P(=S)-; -(-NR)(-S)P(=S)-; -(-O)(-NR)P(=S)-; and -(-NR)P(=S)-;

wherein the atom A, attached to unsaturated heteroatom E is attached to the sulfur which in turn is linked via a group G to the silicon atom;

each R is chosen independently from hydrogen, straight, cyclic, or branched alkyl that may or may not contain unsaturation a carbon-carbon double bond, an alkenyl groups, an aryl groups, and and/or an aralkyl groups, with each R contains containing from 1 to 18 carbon atoms;

each G is independently a monovalent or polyvalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl wherein G can contain from 1 to 18 carbon atoms, wherein at least one G is polyvalent, and if G is univalent monovalent, G can be a hydrogen atom;

X is independently selected from the group consisting of -Cl, -Br, RO-, RC(=O)O-, R₂C=NO-, R₂NO-, R₂N-, -R, and -(OSiR₂)t(OSiR₃) wherein each R is as above and at least one X is not -R;

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p is 0 to 5; r is 1 to 3; z is 0 to 2; q is 0 to 6; a is 0 to 7; b is 1 to 3; j is 0 to 1, but it may be 0 only if p is 1; c is 1 to 6; t is 0 to 5; s is 1 to 3; k is 1 to 2; with the provisos that (I) if A is carbon, sulfur, or sulfonyl, then (i) a + b is 2 and (ii) k is 1; (II) if A is phosphorusphosphorous, then a + b is 3 unless both (i) c is greater than 1 and (ii) b is 1, in which case a is c + 1; and (III) if A is phosphorusphosphorous, then k is 2 and G is a monovalent or polyvalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl wherein G contains from 1 to 18 carbon atoms.

2. (Original) A blocked mercaptosilane according to claim 1 wherein R is selected from the group consisting of methyl, ethyl, propyl, isobutyl, phenyl, tolyl, phenethyl, norbornyl, norbornenyl, ethynorbornyl, ethynorbornenyl, ethylcyclohexyl, ethylcyclohexenyl, and cyclohexylcyclohexyl.

3. (Previously Presented) A blocked mercaptosilane according to claim 1 according to formula (1).

4. (Withdrawn) A blocked mercaptosilane according to claim 1 according to formula (2).

5. (Original) A blocked mercaptosilane according to claim 1 which has been partially hydrolyzed.

6. (Currently Amended) A blocked mercaptosilane according to claim 1 wherein Y is selected from the group consisting of: -SC(=O)-; -S(=O)-; -OS(=O)-; -(-S)P(=O)-; and -P(=O)(-)-₂, and wherein Y' is selected from the group consisting of: -SC(=O)-; -S(=O)-; -OS(=O)-; and -P(=O)(-)-₂.

7. (Withdrawn) The blocked mercaptosilane of claim 1 wherein Y is selected from the group consisting of -C(=NR)- and -SC(=NR)-.

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8. (Withdrawn) The blocked mercaptosilane of claim 1 wherein Y is selected from the group consisting of $-S(=O)_2-$; $-OS(=O)_2-$; $(-NR)S(=O)_2-$; $-SS(=O)-$; $(-NR)S(=O)-$; $-SS(=O)_2-$.

9. (Withdrawn) The blocked mercaptosilane of claim 1 wherein Y is selected from the group consisting of $(-S)_2P(=O)-$; $-(-S)P(=O)-$; $-P(=O)(-)$; $(-S)_2P(=S)-$; $-(-S)P(=S)-$; $-P(=S)(-)$; $(-NR)_2P(=O)-$; $(-NR)(-S)P(=O)-$; $(-O)(-NR)P(=O)-$; $(-O)(-S)P(=O)-$; $(-O)_2P(=O)-$; $-(-O)P(=O)-$; $-(-NR)P(=O)-$; $(-NR)_2P(=S)-$; $(-NR)(-S)P(=S)-$; $(-O)(-NR)P(=S)-$; $(-O)(-S)P(=S)-$; $(-O)_2P(=S)-$; $-(-O)P(=S)-$; and $-(-NR)P(=S)-$.

10. (Original) A blocked mercaptosilane according to claim 1 wherein the sum of the carbon atoms within the G groups within the molecule is from 3 to 18.

11. (Original) A blocked mercaptosilane according to claim 1 wherein X is selected from the group consisting of methoxy, ethoxy, isobutoxy, propoxy, isopropoxy, acetoxy, and oximato.

12. (Original) A blocked mercaptosilane according to claim 1 wherein p is 0 to 2; X is RO- or $RC(=O)O-$; R is selected from the group consisting of hydrogen, phenyl, isopropyl, cyclohexyl, isobutyl; and G is a substituted phenyl or substituted straight chain alkyl of C_2 to C_{12} .

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13. (Withdrawn) A blocked mercaptosilane of the formula

$X_3SiGSC(=O)GC(=O)SGSiX_3$, wherein

each R is chosen independently from hydrogen, straight, cyclic, or branched alkyl that may or may not contain unsaturation, alkenyl groups, aryl groups, and aralkyl groups, with each R containing from 1 to 18 carbon atoms;

each G is independently a divalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl, wherein G can contain from 1 to 18 carbon atoms, with the proviso that G is not such that the blocked mercaptosilane would contain an α,β -unsaturated carbonyl including a carbon-carbon double bond next to the thiocarbonyl group;

X is independently selected from the group consisting of -Cl, -Br, RO-, RC(=O)O-, R₂C=NO-, R₂NO-, R₂N-, -R and -(OSiR₂)_t(OSiR₃) wherein each R is as above and at least one X is not -R; and

t is 0 to 5.

14- 32 (Cancelled)

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33. (Withdrawn) A blocked mercaptosilane selected from the group consisting of:

$[(ROC(=O))_p-(G)]_k-Y-S]-G-(SiX_3)_z$ (1); and

$[(X_3Si)_q-G]_s-Y-[S-G-SiX_3]_b]_c$ (2)

wherein

Y is $-OC(=O)-$;

each R is chosen independently from hydrogen, straight, cyclic, or branched alkyl that may or may not contain unsaturation, alkenyl groups, aryl groups, and aralkyl groups, with each R containing from 1 to 18 carbon atoms;

each G is independently a monovalent or polyvalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl, wherein G can contain from 1 to 18 carbon atoms, and if G is univalent, G can be a hydrogen atom;

X is independently selected from the group consisting of $-Cl$, $-Br$, $RO-$, $RC(=O)O-$, $R_2C=NO-$, R_2NO- , R_2N- and $-R$ wherein each R is as above and at least one X is not $-R$;

p is 0 to 5; r is 1 to 3; z is 0 to 2; q is 0 to 6; a is 0 to 7; b is 1 to 3; j is 0 to 1, but it may be 0 only if p is 1; c is 1 to 6; t is 0 to 5; s is 1 to 3; k is 1 to 2; with the provisos that (I) if A is carbon, sulfur or sulfonyl, then (i) a + b is 2 and (ii) k is 1; (II) if A is phosphorus, then a + b is 3 unless both (i) c is greater than 1 and (ii) b is 1, in which case a is c + 1; and (III) if A is phosphorus, then k is 2.

34. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein R is selected from the group consisting of methyl, ethyl, propyl, isobutyl, phenyl, tolyl, phenethyl, norbornyl, norbornenyl, ethylnorbornyl, ethylnorbornenyl, ethylcyclohexyl, ethylcyclohexenyl, and cyclohexylcyclohexyl.

35. (Withdrawn) A blocked mercaptosilane according to claim 33 according to formula (1).

36. (Withdrawn) A blocked mercaptosilane according to claim 33 according to formula (2).

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37. (Withdrawn) A blocked mercaptosilane according to claim 33 which has been partially hydrolyzed.

38. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein the sum of the carbon atoms within the G groups within the molecule is from 3 to 18.

39. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein X is selected from the group consisting of methyoxy, ethoxy, isobutoxy, propoxy, isopropoxy, acetoxy, and oximato.

40. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein p is 0 to 2; X is RO- or RC(=O)O-; R is selected from the group consisting of hydrogen, phenyl, isopropyl, cyclohexyl, isobutyl; and G is a substituted phenyl or substituted straight chain alkyl of C₂ to C₁₂.